

REMARKS

In response to the above Office Action, claim 1 has been amended to limit the buffer plate to a preferred embodiment; namely, "a plain weave net in a range of from 8-mesh to 25-mesh." Support for the buffer plate being a plain weave net can be found on page 11, lines 18-21 of the specification. Support for the range of mesh size can be found in Examples 6 and 7 in Table 4 on page 20 of the specification. See also page 14, line 34 and 35 and page 15, lines 31 and 32 which discloses a buffer plate formed of an 18-mesh plain weave net.

In the Office Action, the Examiner rejected claims 1 and 2 under 35 U.S.C. §103(a) for being obvious over Ikezawa in view of a newly cited reference to Radwanski (U.S. Patent No. 4,970,104). The claims were also rejected over Ikezawa in view of Radwanski, further in view of Boyd and also over Boyd in view of Tsurumi, further in view of Radwanski. The withdrawal of all previous grounds of rejection as set forth in the Office Action of April 1, 2008 is appreciated. However, it is believed the claims are patentable over the new grounds of rejection for the following reasons.

Ikezawa and its relation to the present invention has already been discussed on page 3, line 21 to page 4, line 10 of the Reply filed July 1, 2008 and that discussion is incorporated herein by reference.

A further difference, as now set forth in claim 1, is that the buffer is a plain weave net in a range of from 8-mesh to 25-mesh. As is known, an 8-mesh net has a through-hole length of about 2.4 mm and a through-hole size of about 6 mm² and a 25-mesh net has a through-hole length of about 0.8 mm and a through-hole size of about 0.6 mm². Thus the claimed range of through-hole size of the net is from 0.6 to 6 mm². While many of the claimed features are not disclosed in Ikezawa as argued in

the last Reply, particularly the use of the claimed buffer plate, this feature of the buffer plate is clearly not disclosed or suggested in Ikezawa.

As pointed out by the Examiner, Radwanski discloses a hydroentangling process utilizing a perforated member with water jets passing through openings in the member to form spot entangle bonds. The Examiner, therefore, believes it would be obvious to use such a member in the process of making Ikezawa's composite nonwoven fabric.

The perforated member or drum 18 having perforations 38 is shown in Fig. 2 of Radwanski. As disclosed in column 14, line 56 of the reference, the perforations have a diameter of 3/16 inch and were staggered holes on 5/8 inch centers. This hole size calculates to an area of 18 mm².

On the other hand, the claimed buffer plate is a plain weave net having a through-hole size of from 0.6 to 6 mm², which is less than 1/3 of the hole size of Radwanski.

Thus in Radwanski, the perforated support has comparatively large holes arranged in a staggered manner and a hydraulic jet from a nozzle is applied through the holes of the perforated support for the purpose of hydraulic entangling. As a result, the hydraulic jet energy is concentrated on spots of the webs corresponding to the holes of the perforated support and strong entanglement is applied to these specific spots. The entangled webs thus obtained form a multilayer nonwoven material which is strongly entangled and unified at specific spots, while maintaining inherent properties such as bulkiness and resilience.

On the other hand, in the present invention, the entangling treatment is carried out using a plain weave net as a buffer plate having a much smaller hole area to

moderate the water jet energy. As a result, the present invention has the unexpected effect of decreasing the number of fiber loops as much as possible and also reducing the amount of fibrous micro-matters falling-off from the web to a large extent, as disclosed on page 10, lines 21 to 28 of the specification.

There is no disclosure of this feature or its effect in Radwanski. Accordingly, it is not believed that claim 1 or claim 2 dependent therefrom can be considered to be obvious over Ikezawa in view of Radwanski.

With respect to the rejection based on Ikezawa in view of Radwanski further in view of Boyd, Boyd does not disclose what is missing in Radwanski. Boyd does not even disclose the claimed buffer plate, let alone one having the claimed through-hole size.

With respect to the rejection based on Boyd in view of Tsurumi, further in view of Radwanski, as noted before, Tsurumi discloses a nonwoven fabric of cupra-ammonium regenerated cellulose filaments (Example 1) and discloses in Fig. 8a and Fig. 8b entanglement with a water jet. However, there is also no disclosure or suggestion in Tsurumi, as in Boyd, of the use of a buffer plate having the claimed opening degree, let alone one having the claimed through-hole size which leads to the noted advantages in the claimed nonwoven fabric.

In summary, neither Boyd nor Tsurumi disclose what is missing in Radwanski. Since Radwanski is a part of both of these two grounds of rejection, the claims cannot be considered to be obvious over the noted combination of references.

As required by MPEP § 2143.03. "all words in a claim must be considered in judging the patentability of that claim against the prior art." Moreover, as noted in

MPEP § 2143.02, to support a conclusion that a claim would have been obvious, "all the claimed elements" must have been known in the prior art. None of the cited prior art shows the claimed mesh size of the plain weave net of the buffer plate or the advantages resulting from its use.

Withdrawal of grounds of rejection as set forth in the Office Action and allowance of claims 1 and 2 is, therefore, requested.

An RCE is being filed with this Reply to enable the Examiner to consider the amended claims at this time.

In view of the foregoing remarks, Applicants submit that this claimed invention, as amended, is neither anticipated nor rendered obvious in view of the prior art references cited against this application. Applicants therefore request the entry of this Amendment, the Examiner's reconsideration and reexamination of the application, and the timely allowance of the pending claims.

Please grant any extensions of time required to enter this response and charge any additional required fees to Deposit Account 06-0916.

Respectfully submitted,

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